-- However, it is known that exposing light causes impurities in the air to react photochemically with oxygen in an exposure apparatus that uses i lines (wavelength $\lambda = 365$ nm) as the exposing light and in an exposure apparatus that uses exposing light, the wavelength of which is shorter than that of i lines. Such reaction products (fogging substances) attach themselves to glass members and produce an opaque fog on the glass members. A typical example of such a fogging substance is ammonium sulfate $(NH_4)_2SO_4$, which is produced by a reaction (oxidation) with oxygen in the air, if sulfur dioxide (SO_2) absorbs the energy of the exposing light and attains the excited state. The ammonium sulfate is white in color and results in fogging when it attaches itself to the surfaces of optical members such as lenses and mirrors. The exposing light is scattered and absorbed by the ammonium sulfate, as a consequence of which, there is a decline in the transmittance of the optical system. --

Please substitute the paragraph beginning at page 3, line 5, and ending at line 22, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- In recent years, however, the illuminating systems of exposure apparatus have become increasingly complex in order to achieve diverse illuminating conditions and deformed illumination. As a consequence, maintenance is essential and the spaces filled with the inert gas frequently are exposed to the outside atmosphere whenever such maintenance is carried out. In addition, the inert gas used, such as nitrogen or helium, may have an influence upon the human body. This means that while maintenance is being performed, the supply of the inert gas must be

stopped in order to assure safety. A consequence of this is that the interior of the vessel becomes filled with atmospheric air during maintenance work. After maintenance, the atmospheric air within the vessel must be replaced with inert gas again. Furthermore, if the exposure apparatus is out of action for a long period of time, it is likewise necessary for the inert gas to be substituted. --

Please substitute the paragraph beginning at page 9, line 17, and ending on page 10, line 1, the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- Atmospheric air flows into the vessel 3 if the vessel is opened for maintenance or for some other reason. Further, when the exposure apparatus E1 is placed in operation again after having been opened, it is necessary to replace the atmospheric air in vessel 3 with inert gas again. In such a case, a changeover is made to the evacuation side by the gas-exhaust changeover unit 16 on the exhaust side to thereby evacuate the interior of the vessel 3. The internal pressure of the first vessel 3 is made a suitable negative pressure or is caused to pulsate at a negative pressure and is supplied with the gas from the gas supply unit 11. --

Please substitute the paragraph beginning at page 10, line 2, and ending at line 7, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- The description rendered above deals with the components of the illumination system. However, similar effects can be obtained by a similar method applied to substitution (not shown) of gas such as inert gas within the lens vessel (a second vessel) in the projection lens system 6. --

Please substitute the paragraph beginning at page 11, line 10, and ending on page 12, line 4, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- Fig. 2 illustrates the overall system as seen from a certain angle. The system includes the business office 101 of the vendor (equipment supplier) that provides the equipment for manufacturing semiconductor devices. Semiconductor manufacturing equipment for performing various processes used in a semiconductor manufacturing plant is assumed to be the manufacturing equipment. Examples of the equipment are pre-treatment equipment (lithographic equipment such as exposure equipment, resist treatment equipment and etching equipment, heat treatment equipment, thin-film equipment and smoothing equipment, etc.) and post-treatment equipment (assembly equipment and inspection equipment, etc.). The business office 101 includes a host management system 108 for providing a manufacturing-equipment maintenance database, a plurality of control terminal computers 110, and a local-area network (LAN) 109 for connecting these components into an intranet. The host management system 108 has a gateway for connecting the LAN 109 to the Internet 105, which is a network external to the business office 101, and a security function for limiting access from the outside. --

Please substitute the paragraph beginning at page 14, line 8, and ending at line 22, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- In the example of Fig. 3, on the other hand, a plant having manufacturing equipment provided by a plurality of vendors is connected by an outside network to management systems of respective ones of the vendors of these plurality of pieces of manufacturing equipment, and maintenance information for each piece of manufacturing equipment is communicated by data communication. As shown in the drawing, the system includes a manufacturing plant 201 of the user of the manufacturing equipment (e.g., the maker of semiconductor devices). The manufacturing line of this plant includes manufacturing equipment for implementing a variety of processes. Examples of such equipment are exposure equipment 202, resist treatment equipment 203 and thin-film treatment equipment 204. --

Please substitute the paragraph beginning at page 14, line 23, and ending on page 15, line 9, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- Though only one manufacturing plant 201 is shown in Fig. 3, in actuality, a plurality of these plants are networked in the same manner. The pieces of equipment in the plant are interconnected by a LAN 206 to construct an intranet and the operation of the manufacturing line is managed by a host management system 205. The business offices of vendors (equipment suppliers) such as an exposure equipment maker 210, resist treatment equipment maker 220 and

thin-film treatment equipment maker 230 have host management systems 211, 221, 231, respectively, for remote maintenance of the equipment they have supplied. These have maintenance databases and gateways to the outside network, as described earlier. --

Please substitute the paragraph beginning at page 15, line 21, and ending at line 26, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- Each piece of manufacturing equipment installed in the semiconductor manufacturing plant has a display, a network interface and a computer for executing network-access software and equipment operating software stored in a storage device. The storage device can be an internal memory or a hard disk or a network file server. --

Please substitute the paragraph beginning at page 17, line 16, and ending on page 18, line 5, with the following. A marked-up copy of this paragraph, showing the changes made thereto, is attached in Appendix A.

-- A semiconductor chip is obtained, using the wafer fabricated at step 4, at step 5 (assembly), which is also referred to as "post-treatment". This step includes steps such as actual assembly (dicing and bonding) and packaging (chip encapsulation). The semiconductor device fabricated at step 5 is subjected to inspections such as an operation verification test and a durability test at step 6 (inspection). The semiconductor device is completed through these steps and then is shipped (step 7). The pre- and post-treatments are performed at separate special-

purpose plants. Maintenance is carried out on a per-plant basis by the above-described remote maintenance system. Further, information for production management and equipment maintenance is communicated by data communication between the pre- and post-treatment plants via the Internet or a leased-line network. --

IN THE CLAIMS:

Please AMEND claims 1-8, 10 and 12-14, and ADD new claim 15, as follows. A marked-up copy of the amended claims, showing the changes made thereto, is attached in Appendix A. For the Examiner's convenience, all claims currently pending in this application have been reproduced below:

--1. (Amended) An exposure apparatus for illuminating a reticle with exposing light from an exposing light source via an illuminating optical system and projecting a pattern, which has been formed on the reticle, onto a substrate via a projection optical system, said apparatus comprising:

a vessel within which one of the illumination optical system and the projection optical system is placed;

gas supplying means for supplying a desired gas to said vessel;

vacuum exhaust means for vacuum evacuating said vessel in order to establish negative pressure in the interior thereof from atmospheric pressure; and